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Electrocortical Responses During Script-Driven Emotional Imagery

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Electrocortical Responses During Script-Driven Emotional Imagery

Emotional imagery is a common induction technique used in the laboratory and also employed in various exposure therapy treatments across the anxiety spectrum (e.g., specific and social phobias). Despite its clinical uses, there is a surprising dearth of literature regarding the basic central neural processes underlying emotional imagery, though other peripheral physiological processes have been investigated extensively using heart rate, skin conductance, and startle-blink responses. One imagery study that used a central nervous system psychophysiological measure -event specific brainwave or the event-related potential (ERP) technique- suggests the late positive potential (LPP) of the ERP is larger for unpleasant versus neutral stimuli, implying this ERP may index emotional engagement during imagery. This effect is consistent with the visual perception literature of emotion; however, the visual perception literature also indicates that the LPP is larger for pleasant stimuli versus neutral stimuli and positively correlated with subjective emotional arousal ratings. Using script-driven emotional imagery, we will extend research on the LPP to establish whether 1) the LPP is larger for both pleasant and unpleasant scripts relative to neutral ones and 2) this LPP effect is positively correlated with emotional arousal ratings. Fifty-five participants will make subjective ratings of the scripts and then imagine the scripts while electroencephalographic data are recorded. Upon demonstrating the LPP is larger for emotional (both pleasant and unpleasant) scripts than neutral ones, this study will lay the foundation for future work aimed at determining whether LPP effects are hyper- or hypo-active for socially anxious participants.

Keywords: Imagery, Emotion, Psychophysiology, Electroencephalography